National Centre for Technology in Education
Ionad Náisiúnta don Teicneolaíocht san Oideachas

NCTE PROFESSIONAL DEVELOPMENT

CREATING ICT RESOURCES

MODULE 3 WITH DIGITAL STORYTELLING

Published by
The National Centre for Technology in Education

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Please note:

- Screenshots used in this manual may appear different to those on computer screens used by participants. Variations in versions of the software and differing operating systems may be in use.
- The World Wide Web is constantly evolving and content and URLs (Universal Resource Locators – website addresses) change over time. It is possible that the content located at some of the URLs listed throughout the manual may change over time.

Throughout this module, reference may be made to software titles and suppliers of Internet services. These references are made purely to illustrate or expound course content. Any such reference does not imply any endorsement by the NCTE of a product or company. The reader should be aware that typically there are many products and companies providing similar services in areas related to ICT. Participants should be as informed as possible before making decisions on purchases of ICT products or services. Please refer to www.ncte.ie for details of purchasing frameworks available to schools.

INTRODUCTION

This is a 7.5 hour course, designed by the NCTE, and aimed at equipping primary and post primary teachers with the skills to effectively use ICT as a teaching and learning tool.

The basic principles covered in this course can be applied to any area of the primary or post primary curriculum.

Time is allocated in each module to discussion on how the skills learnt can be used to enhance teaching and learning, with particular reference to:

- Literacy
- Numeracy
- Special Educational Needs

COURSE OVERVIEW

The course consists of three modules.

Module 1 - Creating ICT Resources using the Internet

Module 2 - Creating ICT Resources using Digital Media

Module 3 - Creating ICT Resources with Digital Storytelling

Appendix I - Connecting a Digital Projector to a Laptop

This is the third module of the above course. This module may also be delivered as a standalone course.

CURRICULUM LINKS

NCCA ICT Framework

The NCCA ICT Framework provides a guide to teachers for embedding ICT in curriculum and assessment across curriculum subjects to help students become capable learners who are digitally literate in **Areas C, S, T** and **F** of the ICT Framework.

Area C - Exploring the potential of ICT to **create, communicate, and collaborate** to organise and produce information.

Area S - Developing a critical appreciation of the **role of ICT in society** and habits which reflect **ethical and responsible use of ICT.**

Area T - Using ICT for **thinking and learning** including managing enquiry, assessing information, solving problems, and expressing ideas across a range of curriculum areas.

Area F - Understanding and applying knowledge of the **functions of ICT** including safe practice, maintenance and ergonomics.

While the skills taught in this course are aimed at teachers, it is assumed that students will play an active role in engaging with these ICT technologies. There are three progressive levels of learning in the ICT Framework, from Junior Infants to Junior Certificate. Open *www.action.ncca.ie/en/ict-framework/opportunities* to see the **Demonstrations of Learning** for the level you teach.

The NCTE provides a wide range of supports to schools in the area of ICT integration. When you have completed this course, take some time to explore the NCTE website (www.ncte.ie), especially the videos contained in the Good Practice section, to see how some teachers are integrating ICT in their own classrooms. Explore also the Planning section of the website which provides an electronic version of the e-Learning Handbook and Roadmap, along with other useful resources to use in the development and implementation of your school's e-Learning Plan.

Please note that this NCTE course manual contains some additional content which your course tutor may not have time to cover as part of the 3 module course. It is intended that course tutors will prioritise the basic skills required for you to use ICT as a teaching and learning tool. The manual should provide you with a step-by-step guide to enable you to reinforce these skills when you are back in the classroom, as well as providing you with additional content and information which may be of use to you in the future.

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MODULE 3

CREATING ICT RESOURCES WITH DIGITAL STORYTELLING

DURATION

2.5 hours

OBJECTIVES

This module will enable the participant to:

- Create a digital story incorporating sound and images.
- Identify uses for digital storytelling to support literacy and numeracy development.
- Discuss how digital storytelling can support students with special educational needs.
- Identify safe and responsible digital publishing practices.
- Explore other technologies that can be used to support learning and teaching.

DIGITAL STORYTELLING USING PHOTO STORY 3

What is Digital Storytelling?

Digital stories are "mini movies" made by using digital tools on a computer rather than by using a movie camera. Stories are usually short (less than 7 minutes) and digital tools such as Microsoft Photo Story 3 or Movie Maker or iMovie make it possible for students and teachers to become authors and digital storytellers. The digital tools enable the construction of multi-dimensional stories that are conveyed through a combination of text, images, motions, and sounds.

Digital storytelling will help students think critically, plan, edit and create by using a tool such as Photo Story 3 or Windows Movie Maker. It can be used in the classroom in every subject e.g. History, Art, History, PE, Religious Education, languages, to help students consolidate their learning, present their work to an audience while aiding their digital literacy development. Digital storytelling projects increase student engagement and commitment, especially students who do not respond to traditional academic writing assignments.

In this module we will use Microsoft Photo Story 3 which is a free download from Microsoft. It enables you to create digital stories, projects and photo slideshows from still images. Photo Story 3 is a fun, discovery-based tool which is not difficult to use but produces an excellent final product. You and your students can add audio, narration, background music and effects that include transitions and motion. The video file may then be saved to the teaching computer, school blog, CD or the Web for sharing.

Why use Digital Storytelling in the Classroom?

> *"Our students will leave school as capable independent learners, able to use ICT confidently, creatively and productively, able to communicate effectively, able to work collaboratively, and to critically evaluate, manage and use information."*
>
> *NCCA ICT Vision*

- Digital storytelling can play an important role in group work and collaborative learning within the classroom and can be used to develop literacy and numeracy.
- It enables students to create multimedia resources using images, voice, text and music which can be shared with peers and the wider community.
- The video produced from the Photo Story 3 project may be published on the school website, virtual learning environment or made available on the school's network to other classes.
- Digital storytelling allows students to put into effect all four Areas (C, T, S and F) of the NCCA ICT Framework.
- Creating digital stories will enable students to learn how to be safer and more responsible digital publishers as they learn about copyright, citing sources and the responsible use of personal information and images.

Activity | Tips | Links | Tutor Demo

The NCCA ICT Framework

1. *Open a web browser and go to www.action.ncca.ie/en/ict-framework/opportunities. Locate the Demonstrations of Learning for the Level you teach in Areas C, F, S and T of the ICT Framework.*
2. *Area C for Level 2 states that a 3rd class primary student should be enabled to create information materials, projects and resources using combinations of text, graphics, multimedia and/or sound as appropriate to purpose and audience using ICT tools such as digital storytelling tools.*
3. *Make a list of all the digital storytelling actions that the students you teach should be enabled to perform in Area C.*

Activity | Tips | Links | Tutor Demo | Numeracy

Photo Story 3 may be used to develop numeracy. For example, students could:

- *Create a Number book.*
- *Explain mathematical processes.*
- *Create a Shape book.*
- *Give real world examples of Mathematics.*
- *Create a Maths trail.*
- *Teach Geometry.*
- *Students in Transition-year could take Nobel mathematical and scientific prize-winners and create a digital story around their discoveries.*

Maths and Science teachers might like to consider the topic of bridges and the mathematical shapes that are found in their design. Alternatively they might take a common mathematical mistake, made by for example third year students, and explain it using a sequence of "pen and paper" digital photographs imported into Photo Story 3 with appropriate narration.

Activity | Tips | Links | Tutor Demo | Literacy

Language and literacy can be enhanced by using digital storytelling. Students could:

- *Create instructional photo stories showing how to do a Science experiment using appropriate steps, sequence and scientific language.*
- *Create instructional photo stories showing how to play a game or make a cake using appropriate processes, sequences and language.*
- *Create sequencing photo stories with images of for example, a daily routine. The story can be accompanied by a narrative written and delivered by the students.*
- *Create sequencing photo stories in Religious Education, History or Geography with students appropriately narrating a timeline e.g. The story of a volcano, The Parable of the Mustard Seed.*
- *Create vocabulary theme stories by adding captions in Irish or any language to a series of images on a theme such as 'Éadaí'. This can then be shown to other classes and used a resource for teaching and learning. This may be particularly useful for SEN students, and new language learners of all ages.*
- *Narrate a poem and illustrate its "story" with images. Students could draw their own illustrations and import them as images after recording them on the digital camera. Students will learn about appropriately narrating a poem, timing, diction etc. as well as many ICT functional skills.*
- *Compose a 5-minute drama. Having created a storyboard and script they could use plastic toys for the characters and create appropriate backdrops in Art class. They can customise the motion, add a sound track and save as a video.*
- *Create Book Trailers by scanning, drawing or taking pictures related to a book. They import the pictures into Photo Story 3, add narration to the pictures, and choose or create suitable music. Photo Story 3 then generates a stand-alone video to be shared with other students.*
- *Compile Alphabet Books where each student is assigned a letter of the alphabet. Having taken an image of something in their environment starting with that letter they record their own narration.*
- *Create Talking Books or audio books accompanied by images they record or create.*

OTHER USES OF DIGITAL STORYTELLING ACROSS THE CURRICULUM

The range and variety of uses could include students creating digital stories about:

» Themselves and their families.

» A famous artist, writer, singer.

» Their school.

» A famous historical person or building.

» A field trip report.

» Their favourite sportsperson.

» A Day in the Life of ...

» A local historical landmark.

» Our Green School

» Our eTwinning Project

Primary classes could tell the "story" of Our Digital Day using the digital camera to photograph an entire school day. Then using Photo story 3 they tell the story of how they play, work, learn, pray, rest and even eat. Captions can be in Irish or a modern language they are learning. Their digital story could be shared with parents on a parents' evening or on the class blog.

Post primary students could create a Digital Portfolio. Students could record their work during the year on digital camera and create a digital portfolio using Photo Story 3. The digital portfolio of Transition Year students could be used for assessment purposes at the end of the school-year.

Teachers can use Photo Story 3 to:

- Teach new vocabulary in the infant readers accompanied by appropriate images.
- Demonstrate a process or sequence of steps with the addition of narration or soundtrack.
- Create reflective exercises to inspire student creative writing or reflective pieces.
- Create revision reminders or topic summaries using images and sound rather than text alone.

USING PHOTO STORY 3

Photo Story 3 is available to download free from www.microsoft.com. Click on **Downloads**. Enter **'Photo story 3'** into the search bar.

Requirements: You must also have Windows Media player V.10 installed on your PC.

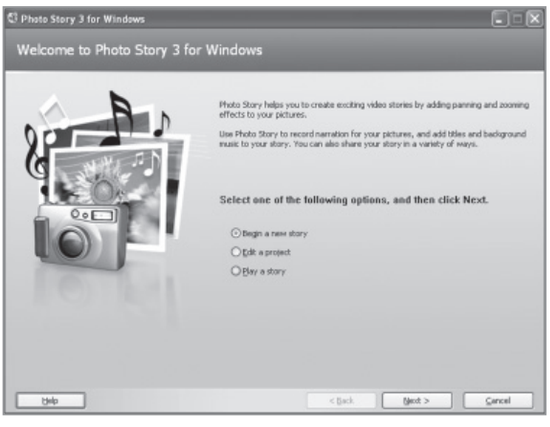


Photo Story 3 for Windows
Welcome to Photo Story 3 for Windows
Photo Story helps you to create exciting video stories by adding panning and zooming effects to your pictures.
Use Photo Story to record narration for your pictures, and add titles and background music to your story. You can also share your story in a variety of ways.
Select one of the following options, and then click Next.
Begin a new story
Edit a project
Play a story
Help
< Back
Next >
Cancel

1. Open Photo Story and select Begin a new story. Then click Next.

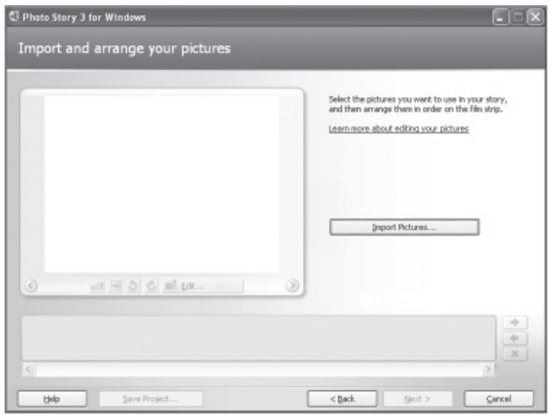


Photo Story 3 for Windows
Import and arrange your pictures
Select the pictures you want to use in your story, and then arrange them in order on the film strip.
Learn more about editing your pictures
Import Pictures...
Edit...
Help
Save Project...
< Back
Next >
Cancel

2. Import your pictures by clicking **Import Pictures**.

3. Click on the images you want to import.

Note: Hold down the Ctrl key and click on the images you wish to select.

Photo Story 3 for Windows
Import and arrange your pictures
Select the pictures you want to use in your story, and then arrange them in order on the film strip.
Learn more about editing your pictures
Import Pictures...
Remove black borders...
Edit...
Help
Save Project...
< Back
Next >
Cancel

4. Select the pictures you want to use and arrange them in order. You can change the order of the images by dragging and dropping them on the timeline or by selecting an image and using the arrow.

5. You can use the icons under the small screen to **correct colour, rotate** your pictures or to **edit** them. When you have finished click Next.

6. Click on **Edit** under the image and you can
   a. Rotate and Crop the images
   b. Add effects
   c. Auto Fix

7. Click **Close** when finished editing.

8. Now you can add a title or text to your pictures and position it on the screen.
9. You can add different effects to your images by choosing an **Effect** from the drop down menu.
10. Click **Next** when you have added the desired text to your images.

Activity | **Tips** | Links | Tutor Demo

Imagebank.ie and Britannica on Scoilnet have images available for educational use once the copyright holder is acknowledged.

ImageBank, www.imagebank.ie is a photo sharing library created by the NCTE. It provides moderated images and photos for photostories, homework, project and classroom use. All photos are shared under Creative Commons licence and may be used once the copyright holder is acknowledged. Teaching students how to upload their own photos for sharing will quickly teach them how ot apply a creative Commons licence to their own photos while helping them to understand their copyright lay responsibilities.

Activity | Tips | Links | Tutor Demo

Create a digital story using Photo Story 3

Using a collection of photos you have taken or Imagebank.ie, select photos which you will use to create a digital story. The digital story should focus on a literacy or a numeracy theme.

ADDING AUDIO

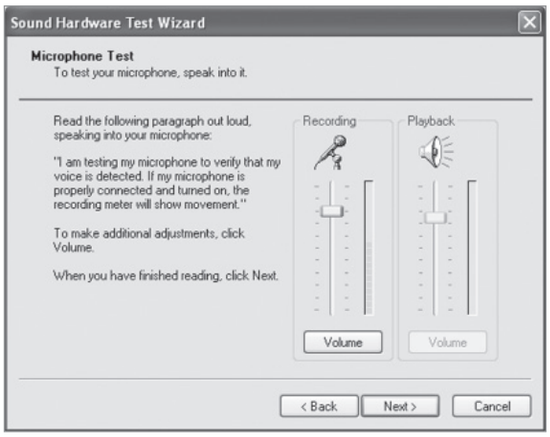
Narrate a story

You can record a story or words by using the **record** button.

Plug your microphone in if there is not a built in microphone on your computer.

You may configure your microphone first to ensure that you are getting the best possible sound quality and levels.

To configure the microphone click on the icon to launch the Sound Hardware Test Wizard.


Sound Hardware Test Wizard
Microphone Test
To test your microphone, speak into it.
Read the following paragraph out loud, speaking into your microphone:
"I am testing my microphone to verify that my voice is detected. If my microphone is properly connected and turned on, the recording meter will show movement."
To make additional adjustments, click Volume.
When you have finished reading, click Next.
Recording
Playback
Volume
Volume
< Back
Next >
Cancel

Recording the narration

1. Click the **red record button** and speak into the microphone. Press the **Stop** button if you wish to stop recording before going on to the next image.
2. Click on the next image and **Record** to continue.
3. You can type your script into the notes area to assist you in the narration.
4. If you make a mistake you can delete the narration and start recording again.
5. Select Preview to view your project.
6. You can determine how the images are displayed and the transitions using the **Customise Motion** button.
7. Preview allows you to preview your changes.
8. Click **Next** when finished.

Activity | Tips | Links | Tutor Demo

Adding narration

Following the steps below, create a digital learning object for use in the classroom.

- *Go to ImageBank.ie or Britannica on Scoilnet.*
- *Browse for images on a topic you currently teach.*
- *Save any suitable images to your computer*
- *Copy and paste the copyright/creative commons licence details into an opened word file.*
- *Import the images into Photo Story 3*
- *Add a title for each image*
- *Record short narration for each image*
- *Add a title slide*
- *Add a credits slide if you haven't already placed the copyright acknowledgement in as a caption as the images appear.*
- *Save the file for playback on your computer*
- *Save the project*

Add background music

You can add background music that plays during your story. A different piece of music can play for each picture or for a group of pictures. You can add as many pieces of music to a story as there are pictures in the story.

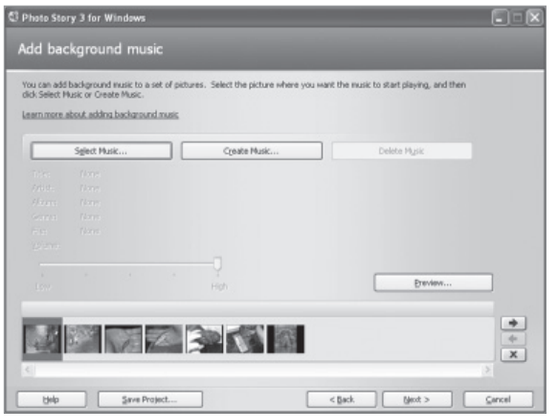


Photo Story 3 for Windows
Add background music
You can add background music to a set of pictures. Select the picture where you want the music to start playing, and then click Select Music or Create Music.
Learn more about adding background music
Select Music...
Create Music...
Delete Music
Preview...
Help
Save Project...
< Back
Next >
Cancel

The **Select Music** option lets you choose a piece of music from your computer, a network folder, or the Internet.

The **Create Music** option lets you customise pre-recorded pieces.

Activity | Tips | Links | Tutor Demo

Music and Copyright

*While the **Select Music** option lets you choose a piece of music from your computer, a network folder, or the Internet you must make it clear to students that unless the music is their own creation it will be the property of others and subject to copyright law. They need to understand the issues of plagiarism and copyright, particularly in relation to copying schoolwork or downloading music and photos.*

If they seek and are given permission to use track by the copyright holder they can credit and acknowledge the copyright holder either in the opening credits or on a Credits Slide at the end of the story.

Customising motion

1. Click **Customise Motion**.
2. Two copies of your image are displayed where your image will start and finish.
3. You may like to select the suggestion that the program has made for you or you can select **Specify start and end position of motion**.
4. Adjust the start and end position by dragging and resizing each image to suit.

Saving a story

Make any changes that you think are necessary by using the **Back** button on each screen. When you are happy, click **Next** and **Save** your story.

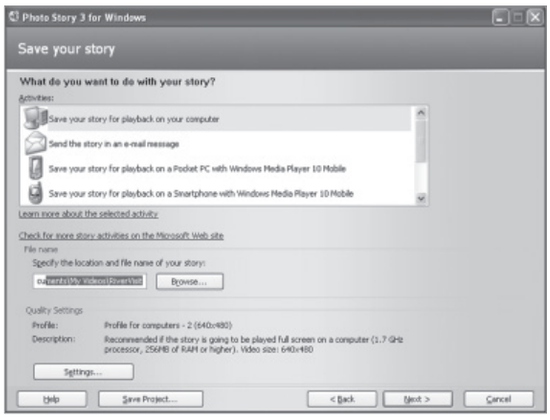


Photo Story 3 for Windows
Save your story
What do you want to do with your story?
Activities:
Save your story for playback on your computer
Send the story in an e-mail message
Save your story for playback on a Pocket PC with Windows Media Player 10 Mobile
Save your story for playback on a Smartphone with Windows Media Player 10 Mobile
Learn more about the selected activity
Check for more story activities on the Microsoft Web site
File name
Specify the location and file name of your story:
Browse...
Quality Settings
Profile:
Profile for computers - 2 (640x480)
Description:
Settings...
Help
Save Project...
< Back
Next >
Cancel

<u>Note:</u> Depending on how you wish to use the video you have created, Photo Story provides you with options for saving in the **Activities** window.

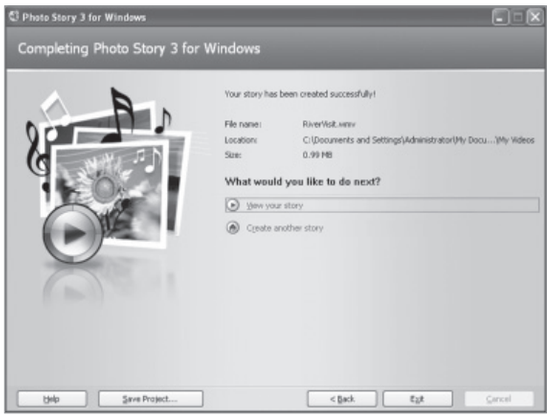
To save the project file to enable you to edit your story later, you must click the **Save Project** button.

Photo Story displays the **Completing Photo Story 3 for Windows** page, which specifies the file name, the location of the story you created, and its file size.

View a Story

Do one of the following to view your stories:

1. After you create a story, on the **Completing Photo Story 3** for Windows page, click View your story.
2. If you have just launched Photo Story:
   a. Choose **Play a story**.
   b. Choose the story you want to play from the list of saved stories.
   c. Click **Play**.



Alternatively, go to the folder where you saved the story, and then double-click that story. The default folder location for saving your stories is the **My Videos** folder. You can open the story by using any program that plays Windows Media Video (.wmv) files.

Activity | Tips | Links | Tutor Demo | **Discussion**

Discuss how you could use Digital Storytelling in your classroom to support literacy or numeracy. Are there any specific curricular objectives that you think Digital Storytelling can address?

Digital storytelling can be a very motivational tool for children with special educational needs. With a particular child in mind, consider how digital storytelling could support their learning.

Digital storytelling for Students with Special Educational Needs

Creating an instructional photo story for use in the classroom can quickly be achieved by choosing a topic that is relevant to the class you are currently teaching. Many students with language or literacy needs or special educational needs find using Photo Story to be very stimulating and rewarding. With only a little text they can create a professional "mini movie" or digital story that can showcase their talents and learning to parents and the wider community.

ASSESSMENT

Ways of assessing literacy using digital storytelling

Creating an assessment rubric will assist in the assessment of students' oral, reading writing and numerical skills when using Photo Story 3. There are rubric examples online but before the project is assigned you should clearly plan the learning intention of the project.

Set clear goals as to what you want the students to achieve:

- Visually with Photo Story 3.
- Communicatively in their narration.
- In terms of content understanding.
- In terms of any accompanying documentation.
- In terms of responsible use of digital tools.

Activity | Tips | Links | Tutor Demo | Assessment

Assessment for Learning

Please take some time to consider ways in which the resources covered in this module would assist with assessing the students in your class.

Take a look at some sample rubrics and adapt a rubric for use with your students.

e.g. www.ncte.ie/upload/cpd/WikisPlusforLearning/Student_Peer_Assessment.pdf
www.jasonohler.com/storytelling/assessment.cfm

Digital Storytelling can be used by students in any topic or subject. Students will demonstrate their oral, reading writing and numerical skills as well as their digital literacy skills through digital storytelling. Students can also peer assess the work and learn through assessment for learning. Consider some further examples:

- Give students a task to complete using Photo Story 3 e.g. anti-bullying, an awkward social situation. This might be useful for integration with SPHE.
- Students create their own story for their peers or for some of the junior members of the school.
- CSPE, RE teachers might consider a moral issue e.g. underage drinking or stealing.
- Science teachers might consider using vectors and flying by plane.
- Students could use a photostory to illustrate a particular point of view or perspective e.g. Pollution is wrong from the perspective of an animal.

Activity | Tips | Links | Tutor Demo

Useful Websites

Digital Storytelling

Many video tutorials on using Photo Story 3 are available online on You Tube.
Search for teaching resources using search terms Photo Story, Digital Storytelling, your subject area, for some of the many resources created and shared by other teachers.

Video Tutorials	*http://drscavanaugh.org/digitalcamera/photostorytelling/storytelling_PhotoStory.htm*
General educational uses	*http://digitalstorytelling.coe.uh.edu/*
Mathematics examples	*http://digitalstorytelling.coe.uh.edu/mathematics.html*
Geometry Digital Storytelling	*http://homepage.mac.com/emlord/tie/artifacts/mathCameras/ds.html*
Project ideas	*http://21stcenturyteaching.pbworks.com/w/page/833439/Ideas-for-Photostory-3-Projects*

Copyright

Video explaining copyright using Disney clips.	*http://www.cartoonbrew.com/disney/a-fairy-use-tale.html*
Fun copyright interactive	*http://www.cyberbee.com/cb_copyright.swf*
Copyright for Kids	*www.copyrightkids.org*
	http://homepage.mac.com/prr/copyright.html

Citing Sources

Simple layouts from 6 years onwards	*http://kathyschrock.net/research/works2.htm*
Avoid Plagiarism	*http://kathyschrock.net/research/plagiarism.htm*

Creative Commons

	http://creativecommons.org/
Explained in ImageBank	*http://imagebank.scoilnet.ie/moreinfo.aspx?id=creativecommons*

Fair Use Teacher Guidelines

http://www.halldavidson.net/chartshort.html

Images

Copyright friendly image sites but remember you must still cite your sources.

	www.imagebank.ie
	www.scoilnet.ie/ >Britannica Online
National Library Digital Photos	*www.nli.ie/digital-photographs.aspx*
	http://copyrightfriendly.wikispaces.com/
	http://commons.wikimedia.org/wiki/Main_Page

Internet Safety

	www.ncte.ie/InternetSafety
	www.webwise.ie
Acceptable Use Policies	*www.webwise.ie/article.aspx?id=4527*

Curriculum and Assessment

	www.ncca.ie
	www.action.ncca.ie
	http://edorigami.wikispaces.com

OTHER TECHNOLOGIES

Visualisers

A visualiser (also referred to as document camera) is a tool that enables teachers to show any physical object to their students, via a digital projector. The digital video camera is fixed to an arm on a base. The computer and visualiser may be connected to the data projector simultaneously. The teacher chooses which is to be displayed by the press of a button.

The teacher can demonstrate to the whole class at once, something previously only possible on a group or one-to-one basis. Documents such as books, copies, papers, magazines or maps can be placed underneath the visualiser lens so that they can be projected onto a screen. 3D items such as coins, leaves, insects or other artefacts can be displayed to the whole class. Most visualisers have a zoom facility allowing the teacher to display the smallest of details. Any non-digital material can be instantly shared by all.

Unlike the overhead projector, specially prepared transparencies are not required. Visualisers can show documents, books, art work and 3D objects directly. Entire pages can be shown or minute details zoomed into. A still image can be captured of the object and saved in the visualiser. The image quality depends on the camera resolution but is generally very good. Detail zooming gives you great flexibility, and really help push the boundaries of how to use technology in a whole class teaching environment. It opens up many more ways of promoting effective teaching within whole class / group contexts.

Visualisers are a simple yet very powerful technology to use in the classroom. They can be used across the entire curriculum, in a number of different ways. It is a simple to use technology that appeals to both teachers and students.

The visualiser is an effective and efficient tool for collecting and collating students' writing and art work for recording and assessment purposes. It is engaging, interactive and simple to use. Time and money is saved in photocopying, access is instant and presentation is in colour.

Why use Visualisers in the Classroom?

- Students' work can be displayed to the rest of the class instantly.
- Artefacts – even the smallest and most fragile - can be viewed by the entire class.
- The visualiser gives access to scarce resources, such as where the school has only one copy of a book or a student brings in a photograph to show the class.
- The teacher may use it to demonstrate the correct way to hold a pen and how to form letters using a joined script.
- Science experiments can be demonstrated to the class as a whole.
- Immediate feedback may be given on written work by projecting and reading it as a written text which then leads to whole class evaluation.
- By using the zoom facility students can see illustrations clearly.

Activity | Tips | **Links** | Tutor Demo

Advice Sheets

NCTE Advice Sheets:	*http://www.ncte.ie/AdviceSheets/*
What is a visualiser?	*http://www.ncte.ie/media/InTouchJanFeb11.pdf*
Visualisers in the classroom:	*http://www.stjosephsterenure.ie/visualisers.htm*
50 ways to use a visualiser:	*http://www.edtechnetwork.com/document_cameras.html*

Videos on the visualiser in the classroom

Classroom Example:	*http://media.scoilnet.ie/NCTE/CPD/Visualiser_new_book1.wmv*

POCKET VIDEO CAMERA

What is a pocket video camera?

Pocket video cameras are small devices that record at the touch of a button. They have a USB connection built into the camera so require no additional cords or software to work, they simply plug directly into the PC or laptop.

A few suggestions for uses of these video cameras to enhance literacy

- Students create an instructional video showing 'how to' complete a task. This may be used to illustrate procedural writing
- Students can record a task or experiment and use this to illustrate a written report of the event
- Students can record a class event or trip
- Students can dramatise written work, stories or poetry using the flip camera to illustrate the text
- Students can evaluate tasks and experiences
- Students can interview a classmate or an expert on a chosen topic
- Students can explore outside world – record changes in seasons etc
- Students can video what they have been doing and add explanations
- Students can create an ad for a favourite book
- Students can create a storyboard and enact the story using puppets or themselves

Activity | Tips | Links | Tutor Demo

Pocket Video Camera Links

- *Several links to presentations and additional sites relating to pocket video cameras*
  http://www.robinstechtips.com/?p=373
- *Useful overview of flip cameras, their advantages and disadvantages*
  http://cnx.org/content/m32297/latest/
- *Collaborative presentation on how to use flip camera in the classroom*
  http://www.freetech4teachers.com/2010/03/20-ways-to-use-flip-cameras-in.html
- *Useful overview*
  http://www.wbrschools.net/technology/summer2009/Movie%20Making/Using%20FLIP%20Cameras%20in%20Your%20Classroomx.pdf
- *Resource sites for using pocket video cameras*
  http://theteachershub.com/2009/10/5-resource-sites-for-using-flip-cameras/

NOTES

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National Centre for Technology in Education
Ionad Náisiúnta don Teicneolaíocht san Oideachas

APPENDIX 1

USING A DIGITAL PROJECTOR WITH A LAPTOP

OBJECTIVES

This document aims to enable the participant to:

- Use a digital projector in the classroom.
- Attach a laptop to a digital projector or interactive whiteboard.
- Troubleshoot problems connecting a laptop to a digital projector or interactive whiteboard.

DIGITAL PROJECTORS

WHY USE A DIGITAL PROJECTOR IN THE CLASSROOM

The digital projector is highly effective as a means of instruction or demonstration in classrooms, computer rooms, staff training, or parents' groups. Its many uses include

- Presenting student work to the whole class.
- Projecting images in conjunction with wireless mouse/keyboard, wireless slate, a visualiser or an interactive whiteboard.
- Displaying and browsing Web sites in a controlled and collaborative manner.
- Demonstrating or using educational software in a whole class context.
- Presenting video to student/parent audiences in conjunction with a TV, video or Internet source.
- Facilitating whole class teaching by display resources and materials to the class.
- Providing multimedia content for students with special needs who can particularly benefit from material being presented visually as it can aid in both information processing and retention.
- Enhancing professional development with staff groups via large screen projection.
- Facilitating video conferencing via large screen group participation.
- Focusing and engaging the students in the content being displayed.

Activity | **Tips** | Links | Tutor Demo

Watch the NCTE video Connecting a Fixed Digital Projector to a Laptop at www.ncte.ie/GoodPractice/Videos. A video Connecting a Portable Digital Projector to a Laptop is also available. Both videos have sub-titled versions.

For more information on digital projectors see the NCTE Advice Sheet at www.ncte.ie/ICTAdviceSupport/AdviceSheets/

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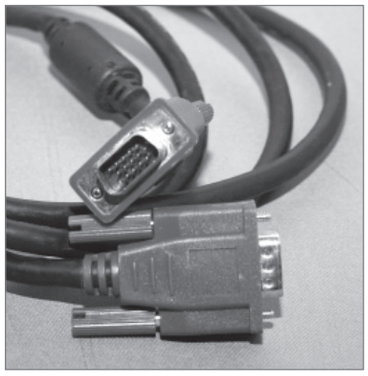
CONNECTING A DIGITAL PROJECTOR TO A LAPTOP



Note: An interactive whiteboard is connected in a similar manner.

Step 1: Connecting the VGA cable to the laptop

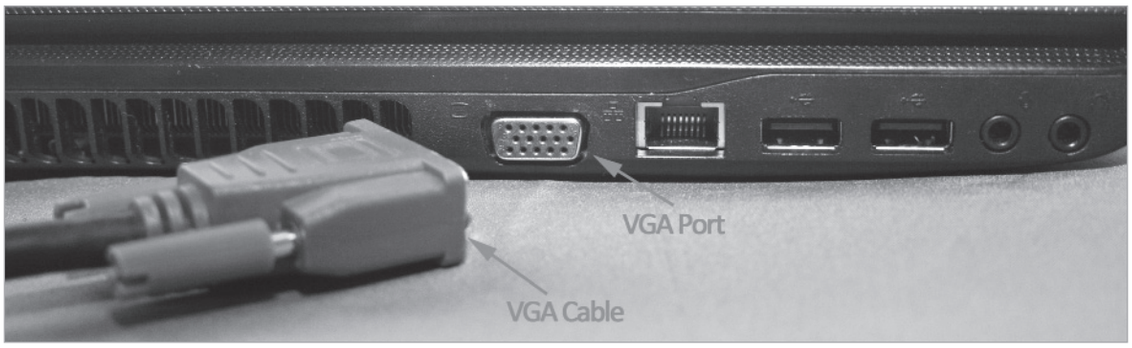
Ensure that the laptop and digital projector are off before commencing.

The VGA cable, pictured here, has 15 pins.

1. Locate the VGA connector / port, on the back of your laptop.
2. Insert the VGA cable into the VGA Connection on the laptop as in the image below.

Note: The wider part of the connection is at the top.

3. Do not exert too much force or you may bend the pins on the connection.
4. Hand-tighten the screws on each side of the connector. A poor connection can result in an intermittent or distorted picture.

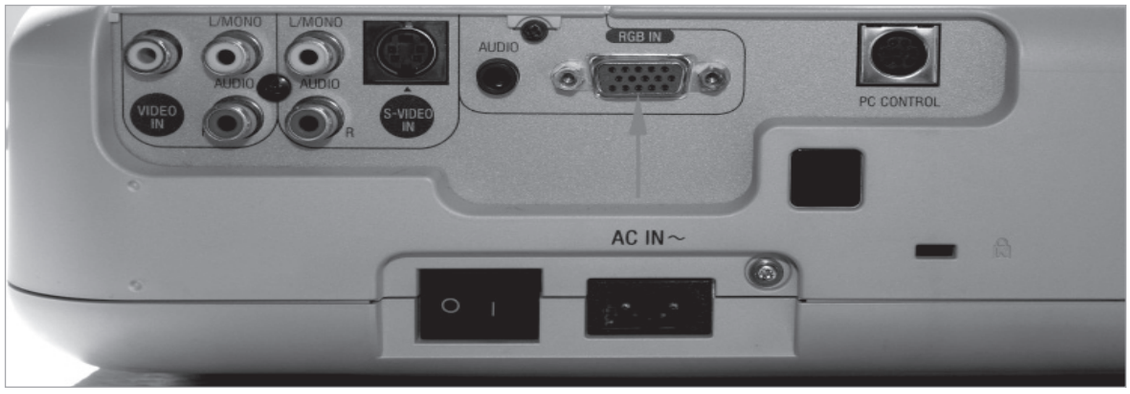


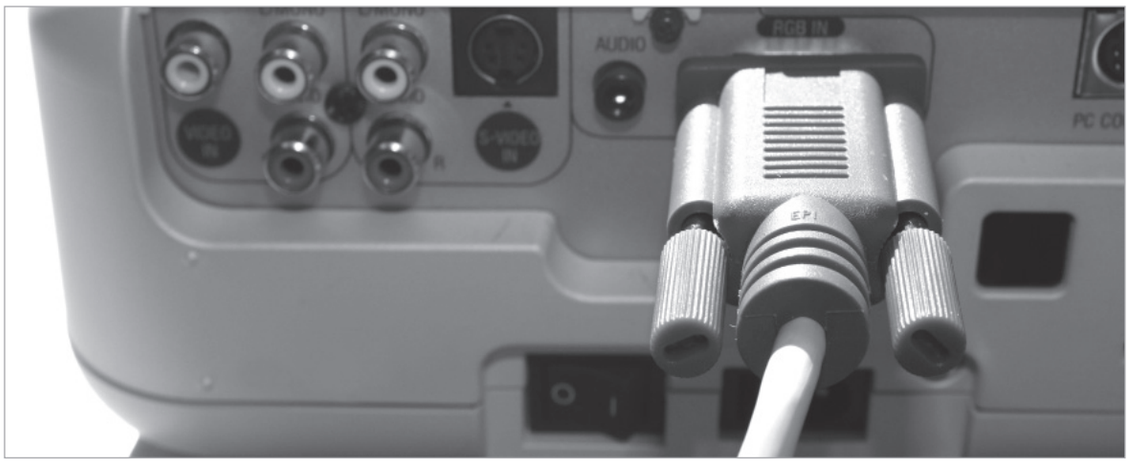
Step 2: Digital Projector VGA connector / port

If your digital projector is already mounted on the ceiling, wall or to an interactive whiteboard you can ignore this step.

If the VGA cable is not already connected to the digital projector then:

1. Locate the VGA connector/port on the back of the Digital Projector.
2. Insert the VGA cable into the computer input e.g. Input 1





Step 3: Establishing a connection

Once the VGA cable is in place you can turn on the digital projector and then the laptop.

1. Turn on the projector.
2. Turn on the laptop.

If you do not have the image of your laptop screen on the digital projector screen when the laptop has booted up then you will need to press the following key combination to activate a connection. You will need to **press and hold down** the Fn (Function) key **while** pressing and holding down the appropriate CRT/LCD function key.

Typically, it is a combination of the Fn key and one of the function keys (F1 through F12) on your keyboard. Depending on your laptop model either, the letters CRT/LCD or an illustration of a monitor and a laptop, will be on the appropriate function key. Moving between two screens like this is known as "to toggle".

Some examples of key combinations:

DELL Fn & F8

IBM Fn &F7

Toshiba Fn +F5

Consult your laptop's documentation for specific information regarding your laptop.

3. **Press and hold** the Fn key.
4. **Press** the CRT/LCD function key.
   - **Release** both keys. (This may make your laptop display go black. You can get your laptop screen back by pressing those keys again.)
   - Most laptops have **three possible display combinations:**
     - o laptop screen only
     - o laptop screen and projector
     - o projector only

You cycle through these by pressing the Fn and the CRT/LCD

until you get to the desired display combination.

Activity | Tips | Links | Tutor Demo

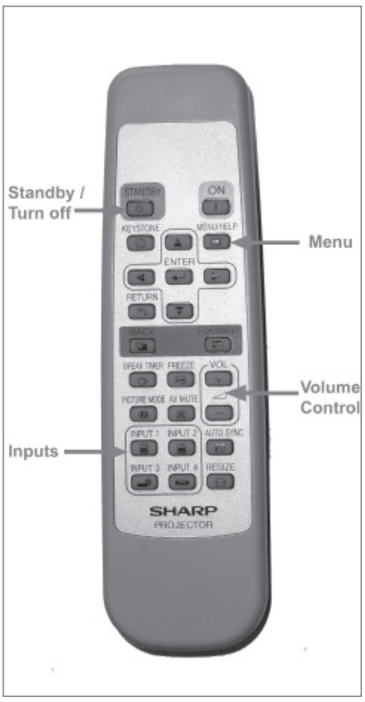
Function Key Combinations

The function key combinations vary by computer manufacturer. Some models have a monitor icon on the key. You may have to consult your user manual or the Internet for the combination on a particular make and model of laptop.
www.aitech.com/support/newlapt.html may be of assistance.

THE REMOTE CONTROL

Most digital projectors come equipped with a remote control. Many of the same functions on the control panel of the digital projector are also on the remote control.
The most commonly used features on the remote are:

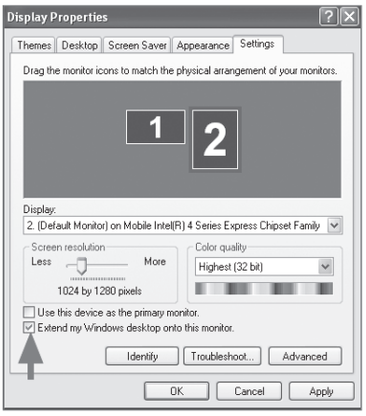
- Inputs: Choose the same input that your VGA cable is plugged into in the back of the projector. Input 1 and 2 are usually for connecting to the computer.
- Volume Control lets you adjust the volume on the digital projector. VGA cables transmit video only.
- Standby button when pressed once puts the digital projector into standby mode. Press the standby button again if you wish to turn off the projector.



Note: This is the correct way to turn off the projector. The fan continues to run for some time after turning off the projector in this way. The fan continues to run to cool down the bulb. Do not unplug the projector until the fan has stopped.

- Menu allows access to various controls on the projector. Most projectors have an 'eco mode' and a 'bright mode'. Running a projector in 'eco mode' reduces the brightness slightly but it reduces the fan noise and increases the bulb life.

Manually Configure Display



Sometimes it may be necessary to manually configure multiple displays. This will often vary from laptop to laptop, depending on the graphics chip and software installed.

Method 1

a) Navigate to the **Control Panel.**

b) Click on **Display,** and then on **Settings.**
On this screen you should see two numbered boxes, labelled 1 and 2.

d) Clicking "Identify" should flash a number on the screen to indicate which monitor is which.

e) Below this is a slider that sets the resolution and colour depth of the output.

f) Click the monitor (1 or 2) then make changes to the resolution and colour depth.

g) Click on the **Apply** button after changes are made.

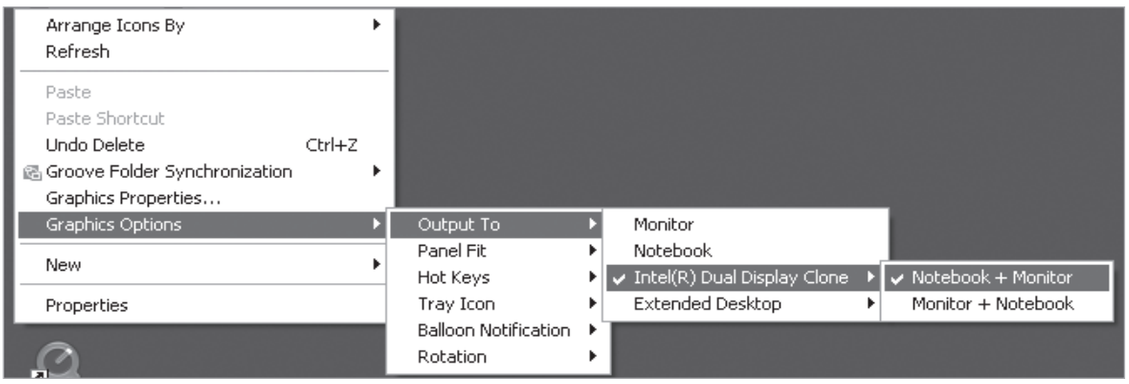
h) On the **Settings** tab, click the monitor icon that represents the monitor you want to use in addition to your primary monitor.

i) Select the **Extend my Windows desktop onto this monitor** check box.

Method 2

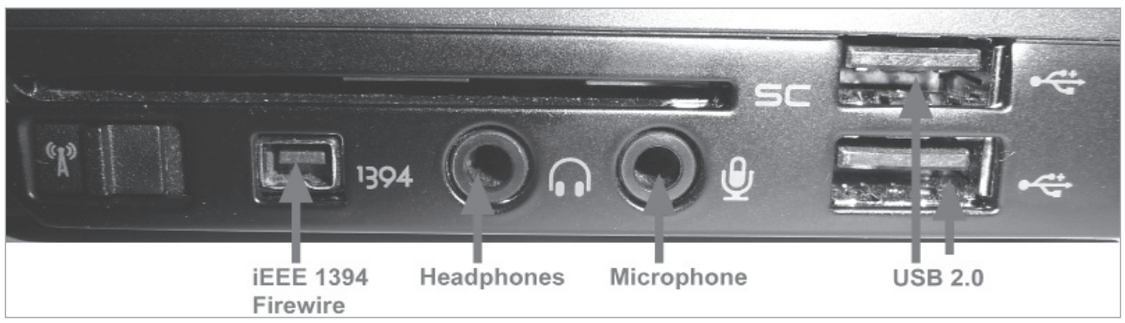
a) Right click on the Desktop.

b) Select Graphics Options > Output To > (see example below). The options will vary from laptop to laptop.



CONNECTIONS ON A LAPTOP

Most laptops have the following connections:

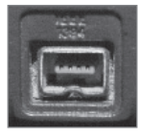


USB 2.0

Most laptops come with three to four USB 2.0 ports. They are the easiest means of connecting a peripheral (mouse, scanner, printer, digital camera) to your laptop. USB ports can also distribute electrical power and charge many peripherals, including mobile phones.

FireWire (IEEE 1394)

FireWire (IEEE 1394) ports are mostly used to transfer video to and from a video camera or to connect to a hard drive.

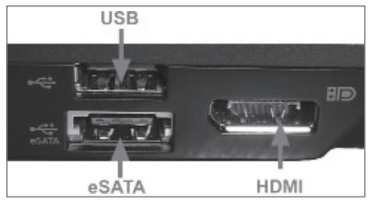


Ethernet Port

This port allows you to connect your laptop to a wired computer network (LAN) or Broadband high speed Internet connection via a standard Ethernet network cable.

HDMI Connector

With an HDMI (High Definition Multimedia Interface) port you can connect your laptop to any HD TV or Digital Projector. The HDMI cable will carry both video and audio.



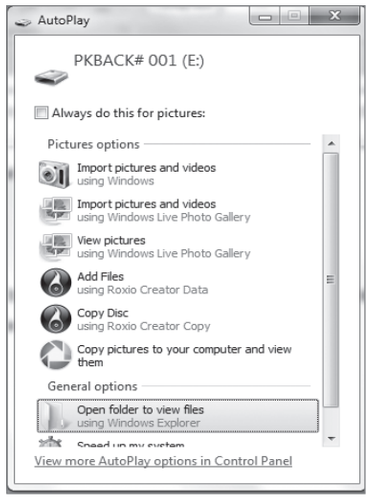
eSATA

Used for attaching an external hard drive, eSATA (external serial ATA) ports are found on a number of business and multimedia laptops. Portable hard drives are most commonly used in the eSATA drive but it may also be used as a USB port.

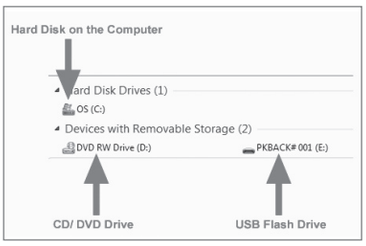
USB Flash Drives

A flash drive may be also called a pen drive, thumb drive, or memory stick. It is a small storage device that can be used to transport files from one computer to another.
Flash drives are popular because they can hold a considerable amount of digital content and are fast, reliable, and portable.

Insert the drive into any USB port on the computer and after a few seconds the computer will detect it.
Usually an AutoPlay dialogue window opens automatically offering you options or various actions you may take with the USB drive.



The drive may also be opened by going to **My Computer** and clicking on the USB drive.



Activity | Tips | Links | Tutor Demo

Troubleshooting Checklist

If there is no image from the projector:

- *Check that the VGA cable is firmly connected to the digital projector and the laptop*
- *Check that the digital projector is turned on and that the bulb is lighting. You will see light coming from the bulb even if there is no image.*
- *Check that you have chosen the correct input on the digital projector. The inputs / source may be changed by using a remote control or on the control panel.*
- ***Press** and **hold** down the Function Key, **Fn,** and press the **LCD/CRT function key.** Check for an image on the whiteboard. If no image appears repeat the process twice again. This usually cycles you through three video output modes, which are "Video to monitor only", "Video to both monitor and digital projector" and "Video to digital projector only".*

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